10/579,136
AMA 4/12/10

IN THE SPECIFICATION

Please amend the specification as follows:

lines 13-25 of page 12, lines 1-23

AMA 4/12/10

1. *On page 11, line ~~8-10~~, please amend as follows:*

According to the present invention, there is provided a data processing apparatus for scrambling data ~~which are under being transferred or de-scrambling data~~ which are under being transferred or de-scrambling scrambled data which are being transferred, which comprises: an ID storing section which stores an ID information relating to a sector which is a scrambling block unit of data under being transferred, which ID information is set by a central processing unit; a sector counter section which counts the number of the sectors in the data under being transferred; an operation section which adds the ID information from the ID storing section and the sector number information from the sector counter section, a scramble seed value table conversion section which converts the addition result which is inputted from the operation section into a scrambling seed value; a scramble filter of at least one byte which, making a period during which data of a predetermined length is transferred one cycle, produces a next cycle scramble seed value from the present cycle scramble seed value; a selector which selects a scramble seed value which is outputted from the scramble seed table conversion section when the data to be transferred is data at a top of a sector, and selects the scramble seed value which is outputted from the scramble filter section otherwise, to output the selected result to the scramble filter; and the data under being transferred being scrambled or the scrambled data under being transferred being de-scrambled using the scramble seed value which is outputted from the selector.

lines 7-12

AMA 4/12/10

2. *On page 11, ~~line 25 and page 12, line 1~~, please amend as follows:*

10/579,136
AMA 4/12/10

According to the present invention, there is provided a data processing apparatus, which comprises: the scramble filter section which includes at least two scrambling filters, selects a scrambling filter in accordance with the data length of the data to be transferred to produce a next cycle scrambling seed value from the present cycle scrambling seed value.

AMA 4/12/10

3. *On page ~~15~~ 14, lines ~~6-8~~ 11-16, please amend as follows:*

According to the present invention, there is provided a data processing apparatus, which comprises: the scramble filter section which includes at least two scrambling filters, selects a scrambling filter in accordance with the data length of the data to be transferred, to produce a next cycle scrambling seed value from the present cycle scrambling seed value.

AMA 4/12/10

4. *On page ~~15~~ 14, lines ~~13-15~~ 17-21, please amend as follows:*

According to the present invention, there is provided a data processing apparatus, which comprises: the scramble filter section which includes at least two scrambling filters, selects a scrambling filter in accordance with the jumping destination of the data to be transferred, to produce the scrambling seed value.

5. *On page ~~17~~ 14, lines ~~5-7~~ 24-25 page 15, lines 1-25 16, lines 1-7 and ~~10~~, and page ~~18, line 2~~, please amend as follows:*

According to the present invention, since a data processing apparatus for scrambling data which are under being transferred or de-scrambling scrambled data which are under being transferred, comprises an ID storing section which stores an ID information relating to a sector which is a scrambling block unit of data under being transferred, which ID information is set by a central processing unit, a sector counter section which counts the number of the sectors in the data under being transferred, an operation section which adds the ID information from the ID storing section and the sector number information from the sector counter section, a scramble

seed value table conversion section which converts the addition result which is inputted from the operation section into a scrambling seed value, a scramble filter of at least one byte which, making a period during which data of a predetermined length is transferred one cycle, produces a next cycle scramble seed value from the present cycle scramble seed value, a selector which selects a scramble seed value which is outputted from the scramble seed table conversion section when the data to be transferred is data at a top of a sector, and selects the scramble seed value which is outputted from the scramble filter section otherwise, to output the selected result to the scramble filter, and the data under being transferred is scrambled or the scrambled data under being transferred is de-scrambled using the scramble seed value which is outputted from the selector, a scrambling processing having a high reliability or a de-scrambling processing in a disc interface section in a DVD system can be carried out, using a correct scramble seed value which is produced by using, not the ID information included in the data under being transferred, but a secured information which is set by a central processing unit. Further, it is possible to perform data transfer of two [[byte]] bytes or more during one cycle, thereby enabling the descrambling process in which data to be operated change continuously, at high speeds.

IN THE SPECIFICATION

Please amend the specification as follows:

AMA 4/12/10

1. Please amend the paragraph beginning at page ~~6~~, ~~line 6~~ of the original specification as follows: 5 lines 5-17

Since there are the above-described two problems, it is general that a scramble filter is inserted in the host interface shown in figure 6 in a conventional DVD system. It is because the ID information after the error correction is conducted has a high reliability, continuity of the data is also secured because there are data of all addresses after the error correction, thereby enabling the de-scrambling.

Patent Document 1: Japanese Unexamined Patent Publication No.11-242647 (Fig.1)

Non-patent Document 1: ecma international Home Page "DVD format" [searched on October 16, 2003], ~~Internet <URL:http://www.ecma-international.org/publications/standards/Ecma-267.htm>~~ Ecma-267.pdf

AMA 4/12/10

2. Please amend the paragraph beginning at page ~~25~~, ~~line 10~~ of the original specification as follows: 23 lines 12-20

The selector 105 selects the scramble SEED value 203 to output the value 203 as a scramble SEED value [[20]] 205 when it receives a sector top signal 204 indicating the top of the sector, i.e., when transferred data is the top of the sector, while it selects a scramble SEED value 206 which is outputted from the normal scramble filter 104 which will be described later to output the value 206 as the scramble SEED value 205 when the transferred data is not the top of the sector. The selector 105 receives the sector top signal 204 from a CPU such as a microcomputer.